Message

From: Rossi, Debra [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP

(FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=F1AA8EE0AD5E41C5B1D296767097F89E-DROSSI]

Sent: 4/30/2019 1:51:01 PM

To: Harris, Michael [Michael.Harris@newcastlede.gov]; John C. Andrade Esquire [jandrade@pgslegal.com] CC: Michael Ruth (mcrrai@gmail.com) [mcrrai@gmail.com]; Miller, Theresa [theresa_miller@golder.com];

susanna@trustsc.com

Subject: RE: Army Creek Landfill - Revised Additional Investigation Work Plan and Sampling and Analysis Plan-Revision 1

Mike and John,

EPA has reviewed the March 2019 Revised Work Plan for Additional Investigation, including the Sampling and Analysis Plan, and has the following comments:

REVISED ADDITIONAL INVESTIGATION WORK PLAN

Page 10, Groundwater Monitoring: Collection of samples from two different depths within long well screens is proposed. It is not clear what method would be used to sample different locations within the same screen interval. It should be noted that a pumped sample, regardless of where the pump is placed in the screen, will provide a flow weighted sample from the screened interval. Volumetric purging and sampling of the entire well screen should be conducted for the work comparing volumetric purging and sampling with low flow purging and sampling at an individual well. It should also be a well-by-well analysis; results from one well are not transferable to another well location. The Work Plan should specify how the samples from the two different depths will be collected (e.g., low flow purging and sampling) and how the data will be compared both with historical data (Is the proposed sampling method/depth consistent with historical sampling protocol?) and volumetric purging and sampling data.

Table 1: April and October groundwater samples collected from wells MW-28, MW-29, MW-31, BW-1, BW-2, BW-3 and MW-40 should also be analyzed for cations and anions.

SAMPLING AND ANALYSIS PLAN

Section 4.2.2, PFAS in Groundwater: It is reported here that wells MW-28, MW-29, MW-31, BW-3, and MW-58 will be purged and sampled from two locations within the screened interval to assess potential differences in concentrations across the two units (see discussion in Section 4.3.3.3). A pumped sample, regardless of where the pump is placed in the screen, will provide a flow weighted sample. The proposed method is not appropriate as a surrogate for a volumetric purging and sampling method. See comment above.

Section 4.3.2.1, Monitoring Well Installation: It is reported here that "the 5- to 7-foot screened interval will be selected for each well will be determined based on visual, olfactory and/or PID evidence of impacts. In the absence of impact evidence, the well will be screened across interval with the coarsest material in either the UPA upper or lower sand. More specifically, the placement of the well screens will be determined in the field, based on: 1) observed volatile organic impact based on organic vapor (i.e., PID) readings; and/or 2) visual evidence of impacts. If there is no evidence of either, then the screen interval will be set across the portion of the UPA (either upper sand or lower sand) with the coarsest materials. Prior to well construction within the advanced borehole, the USEPA will be provided with a draft annotated boring log indicating the proposed well screen interval for their review and approval of the proposed screened interval. Due to concerns regarding limiting resident's access to their property during boring advancement and well installation, a quick response/approval (within two business hours) from the USEPA will be necessary".

It is recommended that a cross section with lithology, bedding correlations and proposed/constructed screen intervals be submitted to facilitate EPA review and approval of proposed screened intervals. Information provided in this format during drilling at DS&G was extremely useful. EPA will provide a response/approval as soon as practicable. Advance

notification regarding the timing of upcoming well construction proposals would help EPA schedule time for proposal reviews.

Please submit responses to these comments to EPA by May 10, 2019.

Thank you.

Debbie

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From: Miller, Theresa < theresa_miller@golder.com >

Sent: Wednesday, March 27, 2019 3:49 PM

To: Rossi, Debra <Rossi.Debra@epa.gov>; Wirtz, Christina (DNREC) <Christina.Wirtz@delaware.gov>

Cc: Michele Ruth (mcrrai@gmail.com) <mcrrai@gmail.com>; Harris, Michael <Michael.Harris@newcastlede.gov>; John

C. Andrade Esquire <jandrade@pgslegal.com>; susanna@trustsc.com

Subject: Army Creek Landfill - Revised Additional Investigation Work Plan and Sampling and Analysis Plan-Revision 1

HI Debbie and Christina,

Please find attached the Revised Additional Investigation Work Plan and Sampling and Analysis Plan-Revision 1 for the Army Creek Landfill in New Castle County, Delaware.

Please let us know if you have any issues opening this file as it is 11MB.

Thanks, Theresa



Theresa A. Miller, PG, LSP

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